GENE BIO SOLUTION

CYTOKERATIN 20

Format	Catalog no.	Pack size	Dilution
Concentrated	GB 062 A, C	0.1, 1.0 mL	1:100
Prediluted	GB 062 AA, H	6.0, 25 mL	Ready to use

PRODUCT DESCRIPTION -

The Cytokeratin 20 antibody is an intermediate filament protein expressed in adenocarcinomas of the colon, stomach, pancreas, biliary system, mucinous ovarian tumors, transitional cell carcinomas of the urinary tract, and Merkel cell carcinomas. CK20 is predominantly non-reactive in squamous cell carcinomas and adenocarcinomas of the breast, lung, and endometrial, in addition to non-mucinous ovarian tumors and small cell carcinomas. Cytokeratin 20 is frequently utilized alongside CK7 and other antibodies to differentiate colon carcinomas (CK20+) from ovarian, lung, and breast carcinomas.

INTENDED USE -

Cytokeratin 20 (CK20) [Ks20.8] is a mouse monoclonal antibody designed for laboratory application in the qualitative detection of cytokeratin 20 (CK20) protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical assessment of any staining or its absence must be supplemented by morphological analyses utilizing appropriate controls and should be interpreted in conjunction with the patient's clinical history and other diagnostic evaluations by a certified pathologist.

SUMMARY AND EXPLANATION -

Cytokeratin 20 is a 46 kDa intermediate filament protein mostly expressed in stomach and intestinal epithelium, urothelium, and Merkel cells. Cytokeratin 20 is a distinctive type I keratin expressed in adenocarcinomas of the colon, stomach, pancreas, and biliary system. Mucinous ovarian tumors, transitional cell carcinomas of the urinary system, and Merkel cell carcinomas also express it. CK20 exhibits minimal reactivity in squamous cell carcinomas and adenocarcinomas of the breast, lung, and endometrial, along with nonmucinous ovarian tumors and small cell carcinomas. Cytokeratin 20 is frequently utilized alongside CK7 and other antibodies

to differentiate colon carcinomas (CK20+) from ovarian, lung, and breast carcinomas.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The first step attaches the primary antibody to its designated epitope. Following the tagging of the antigen with a primary antibody, either a one-step or two-step detection protocol may be employed. A single-step procedure will utilize a polymer tagged with an enzyme that attaches to the main antibody. A two-step approach will involve the addition of a linker antibody to connect with the main antibody. An enzyme-conjugated polymer is subsequently introduced to attach to the linkerantibody.Thepresenceofboundantibodiesisdemonstratedbyacolorimetric response.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - Ks20.8

ISOTYPE - IgG2a

PROTEIN CONCENTRATION - Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - CK20

CELLULAR LOCALISATION - Cytoplasmic

POSITIVE TISSUE CONTROL - Colon Carcinoma

KNOWN APPLICATIONS - Immunohistochemistry
30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95ºC followed by cooling at room temperature for 20 minutes.

SUPPLIED AS - Buffer with protein carrier and preservative

STORAGE AND STABILITY -

Store at 2ºC to 8ºC. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date. Diluted reagents should be used promptly; any remaining reagent should be stored at 2ºC to 8ºC.

Materials required but not provided -

1) Positivetissuecontrol-Hepatocytesoffetalliverorhepatoma
2) Negativecontroltissue(internalorexternal)
3) Microscopeslidesandcoverslips
4) Stainingjarsorbaths
5) Timer
6) Xyleneorxylenesubstitute
7) Ethanolorreagentalcohol
8) Deionizedordistilledwater
9) Heatingequipmentorenzymefortissuepretreatmentstep
10) Detection system
11) Chromogen
12) Wash buffer
13) Hematoxylin
14) Antibody diluents
15) Peroxide block
16) Light microscope
17) Mounting medium

LIMITATIONS-

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.